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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/766,025	01/19/2001	William R. Voigt	1515.3001.001	7873

7590 07/30/2002
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EXAMINER

WALSH, BRIAN D

ART UNIT PAPER NUMBER

3722

DATE MAILED: 07/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/766,025

Applicant(s)

VOIGT ET AL.

Examiner

Brian Walsh

Art Unit

3722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

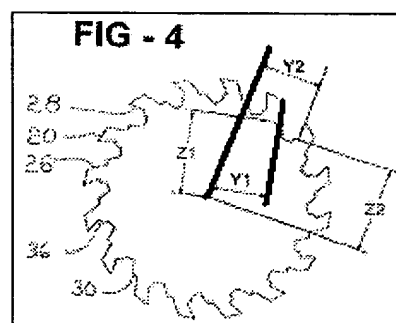
- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION***Drawings***

1. The drawings are objected to because figures 4-8 contain text in addition to the figure labels and reference figures. No text should appear on the drawings except for the figure label and the reference characters. Dimensioning marks are acceptable, however, the actual dimensions should be labeled with a reference character and referred to in the specification.

2. The drawings are objected to because the dimension as noted by (Y1) in figures 4-8 is confusing and does not clearly illustrate a particular dimension of the invention. Dimensional markings of this nature generally consist of two parallel lines extending from a defined point on the object of the drawing.

The extensions of (Y1) in figures 4-8 are not parallel and, therefore, it is unclear what dimensions they are actually defining. Please see the figure to the right for an illustration regarding this objection.



The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “first wall plane [that] intersects the rotor axis” must be shown or the feature(s) canceled from the claim(s). Referring again to figure 4, none of the cross-sectional representations of the rotary cutter illustrate a plane formed by a groove or adjacent wall intersecting the rotor axis. No new matter should be entered.

Art Unit: 3722

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. A correction was made to the specification on page 7, line 20. the phrase "...each wedge lock..." was changed to read "...each wedge **block**..."

Claim Objections

4. Claim 11 is objected to because of the following informalities: in claim 11, on page 3, line 25, the word "spaces" was assumed to be "spaced." Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 12 – 13, "left end wall" and "right end wall" lack proper antecedent basis.

Art Unit: 3722

In claim 1, lines 15 – 16, “first wall plane intersects the rotor axis” is not clear and needs to be rewritten. It is not clear in the drawings, the specification, nor in the claim language what is intended by this limitation. The claims will be examined as best understood.

In claim 4, lines 12 – 13, “left end wall” and “right end wall” lack proper antecedent basis.

In claim 4, line 15, “second wall plane intersects the rotor axis” is not clear and needs to be rewritten. It is not clear in the drawings, the specification, nor in the claim language what is intended by this limitation. The claims will be examined as best understood.

In claim 7, page 2, line 1, “left end wall” and “right end wall” lack proper antecedent basis.

In claim 7, page 2, lines 3 – 4, “first wall plane intersects the rotor axis” is not clear and needs to be rewritten. It is not clear in the drawings, the specification, nor in the claim language what is intended by this limitation. The claims will be examined as best understood.

In claim 11, page 4, line 3, “first wall plane intersects the rotor axis” is not clear and needs to be rewritten. It is not clear in the drawings, the specification, nor in the claim language what is intended by this limitation. The claims will be examined as best understood.

In claim 11, page 4, line 16, “second wall plane intersects the rotor axis” is not clear and needs to be rewritten. It is not clear in the drawings, the specification, nor in the claim language what is intended by this limitation. The claims will be examined as best understood.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1 and 2 are rejected, as best understood, under 35 U.S.C. 103(a) as being unpatentable over Meis in view of Boboltz et. al.

Regarding claims 1 and 2, as best understood, Meis discloses a rotary cutting tool (12) having a plurality of grooves (16) in the rotor extending from end to end. A first groove wall (15) in a first wall plane extending axially from the left end wall to the right end wall, extending outward away from the rotor axis and in the direction of rotation wherein the first wall plane intersects the rotor axis. A plurality of first base support surfaces (15A) each in a base support plane that is perpendicular to the first wall plane wherein all the base support planes that are perpendicular to the first groove wall intersect each other. Meis further discloses a plurality of first rectangular cutter blades (24) each of which have a left and right end, a cutting edge (22) and a base (24b) that is parallel to the cutting edge. The base (24b) of the cutting insert (24) is seated on one of the plurality of first base support surfaces (15a). At least one clamp member (36) clamping the plurality of first rectangular flat cutter blades (24) to the first groove wall (15). Meis further discloses that the first groove wall (15) is a trailing groove wall wherein the rotation of the tool (12) the clamp (36) is arranged before the cutting blade (24). Meis fails to disclose a rotary cutting tool with bearing supports.

Art Unit: 3722

Boboltz et. al. discloses a rotary cutting tool (10) similar to that of the instant invention with a rotor having an outer surface (14), a left and right end, a rotor axis (11), a left end bearing support (12) and a right end bearing support (12a) concentric with the rotor axis, each bearing support extending axially to their respective ends.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the rotary tool of Meis to include the bearing supports of Boboltz et. al. since Boboltz et. al. teaches the supports are needed in order for the rotary cutter to be rotatably mounted (Col. 3, lines 8-10).

9. Claims 1 and 3 are rejected, as best understood, under 35 U.S.C. 103(a) as being unpatentable over Lovendahl in view of Boboltz et. al.

Regarding claims 1 and 3, as best understood, Lovendahl discloses a rotary cutting tool (13) having a plurality of grooves (15) in the rotor extending from end to end. A first groove wall (19b) in a first wall plane extending axially from the left end wall to the right end wall, extending outward away from the rotor axis and in the direction of rotation wherein the first wall plane intersects the rotor axis. A plurality of first base support surfaces (16) each in a base support plane that is perpendicular to the first wall plane wherein all the base support planes that are perpendicular to the first groove wall intersect each other. Lovendahl further discloses a plurality of first rectangular cutter blades (43) each of which have a left and right end, a cutting edge (44) and a base (18c) that is parallel to the cutting edge. The base (18c) of the cutting insert (43) is seated on one of the plurality of first base support surfaces (16). At least one clamp member (20) clamping the plurality of first rectangular flat cutter blades (43) to the first groove wall (19b). Lovendahl further discloses that the first groove wall (19b) is a leading groove wall

Art Unit: 3722

wherein the rotation of the tool (13) the clamp (20) is arranged aft the cutting blade (43).

Lovendahl fails to disclose a rotary cutting tool with bearing supports.

Boboltz et. al. discloses a rotary cutting tool (10) similar to that of the instant invention with a rotor having an outer surface (14), a left and right end, a rotor axis (11), a left end bearing support (12) and a right end bearing support (12a) concentric with the rotor axis, each bearing support extending axially to their respective ends.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the rotary tool of Lovendahl to include the bearing supports of Boboltz et. al. since Boboltz et. al. teaches the supports are needed in order for the rotary cutter to be rotatably mounted (Col. 3, lines 8-10).

Allowable Subject Matter

10. Claims 4-6 and 8-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claim 7 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

12. Claim 11 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter: claims 4 and 7 are drawn to a helical rotary cutter including the limitation of a second set of

Art Unit: 3722

groove walls perpendicular to a second plurality of base support surfaces to interact with a second plurality of flat cutter blades, the first and second set of flat cutter blades being held in the first and second set of base support surfaces by a single clamping arrangement. Claim 11 discloses a method of making a helical rotary cutter comprising the allowable subject matter set forth above. The combination of elements including the first and second set of flat cutter blades being arranged in a first and second set of base support surfaces both sets of blades being held by a single clamping arrangement was not disclosed nor rendered obvious by the prior art.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Riviere, Erkfritz, Qvarth and Nielsen.

Faxing of Responses to Office Actions

14. In order to reduce pendency and avoid potential delays, TC 3700 is encouraging FAXing of responses to Office Actions directly into the Group at (703) 872-9302. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into TC 3700 will be promptly forwarded to the examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Walsh whose telephone number is (703) 605-0638. The examiner can normally be reached on Monday - Friday 7:30 A.M. to 4:00 P.M..

Art Unit: 3722

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on (703) 308-2159. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

BDW
BDW
July 19, 2002

A. L. Wellington
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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700